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(54) PRODUCTION OF ACETAL COMPOUND

)Abstract:

PROBLEM TO BE SOLVED: To obtain an acetal compound of a ketone or aldehyde functional group with a simple, inexpensive method, which uses no other substances than essential alcohol and a catalyst, by reacting an aldehyde or ketone compound with an alcohol in the presence of a catalytic amount of vanadium acetate.

SOLUTION: The aldehyde compound is expressed by the formula of R_2CHO (R_2 is a 1-10C normal alkyl, etc.), the ketone compound is expressed by the formula of R_3COR_4 (R_3 and R_4 are each a 1-10C normal alkyl, etc.) and the alcohol is expressed by the formula of R_1OH (R_1 is a 1-6C normal alkyl, etc.). The amount of the alcohol uses as a solvent is preferably in such a range that a raw material aldehyde or ketone becomes 0.5-5.0mol/L in concentration, and the use of vanadium acetate is in the range of 0.0001-0.1 equivalent based on the raw material aldehyde or ketone. The reaction is commonly carried out in nitrogen atmosphere at a temperature in the range of 0-70° C. After the reaction, the reaction mixture is filtered or extracted with hexane and water followed by drying and condensing to obtain the objective compound.

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